WITH **GREAT POWER**
COMES **GREAT RESPONSIBILITY**

ZOOMLION
TRUCK CRANE
ZTC1000V532G

Max. rated lifting capacity	Max. load moment of basic boom	Max. lifting height of main boom	Max. lifting height of jib
100t	3450kN.m	50.9m	67.2m

ZTC1000V532G
TRUCK CRANE

A 100t truck crane with 5 boom sections, strong power and convenient trans-location.

Leading lifting performance

● 50m boom with 5 boom sections, 14.5t rated load on fully extended boom; 3450kN.m max. lifting moment with the basic boom, and 1862kN.m max. lifting moment with the fully extended boom.
● Double H-type outriggers with 8.4m horizontal outrigger spread and 6.71m longitudinal spread which is the largest in the industry; 21.5t counterweight achieves stable lifting.

Excellent driving performance

● 380 hp engine with large power + FAST 10-speed synchronized transmission, providing strong power and excellent driving performance.
● Crane trans-location with full 21.5t counterweight, highly efficient and convenient.

Lower operational cost

● Multiple fuel consumption reduction measures, including 165 variable pump of large displacement + large PTO speed ratio + IECO module, realizing lower work fuel consumption. Large outrigger spread ensures low overall crane mass; straight layout of drive train provides higher transmission efficiency; fuel consumption per 100km can be as low as 41L
● The crane can travel with the full counterweight for a short distance, therefore lowering use and operational cost.

Crane Data

Hook

100t	980kg	1600×650×770(mm)	16
60t	510kg	1500×550×450(mm)	10
80t	685kg	1600×600×520(mm)	12
70t	689kg	1550×560×530(mm)	12
60t	662kg	1400×560×530(mm)	12
35t	380kg	1450×560×350(mm)	6
8t	125kg	800×300×300(mm)	1

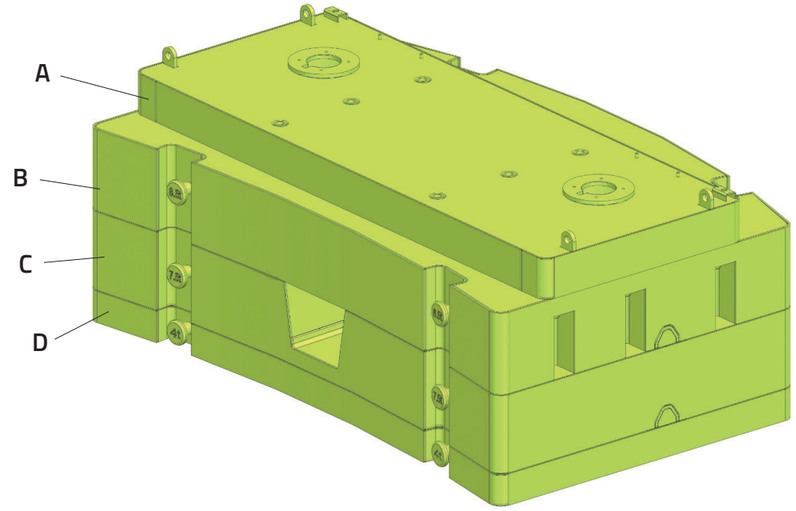
Wire rope

	φ		F
①	Φ20mm	260m	6.5t
②	Φ20mm	200m	6.5t

Optional components

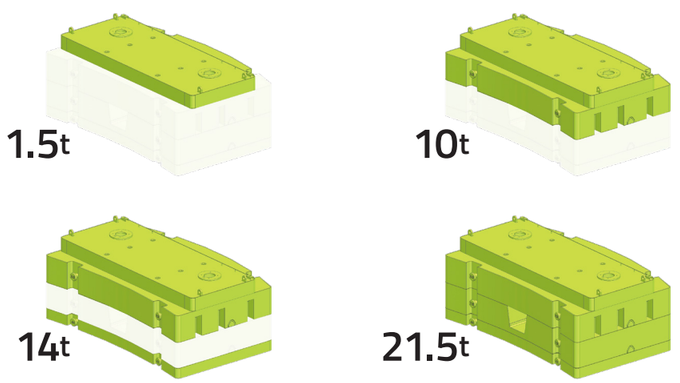
No.	Description	Remarks
1	Hook	Standard configuration: 60t (Single hook) , 8t (Single hook) Optional configuration:100t(double hooks) , 80t (Single hook) , 70t (Single hook) , 60t (double hooks) , 35t (Single hook)
2	Pads	Optional
3	Sleeper	Optional
4	Seat assy.	Optional
5	Solar lights and installation	Optional
6	Spring pin	Optional

Counterweight



	Description	Mass (t)	Dimensions (m)	Quantity (piece)
A	Fixed counterweight	1.5t	3×1.2×0.3	1
B	Auxiliary counterweight	8.5t	3×2×0.4	1
C	Upper movable counterweight	7.5t	3×2×0.4	1
D	Lower counterweight	4t	3×2×0.6	1

Counterweight combinations



Specifications
Crane Superstructure

Hydraulic system
Open type, hydraulic-controlled proportional pilot operated, proportional speed control system, the power element is variable pump plus gear pump.

Hoist mechanism
Composed of a hydraulic motor, winch balance valve, duplex winch brake valve, winch reducer, hositing limit switch, lowering limit switch, and wire rope.

Derricking mechanism
One front-mounted hydraulic cylinder with safety balance valve provides the boom with smooth derricking movements from -1° to 80°.

Slewing mechanism
Composed of a hydraulic motor, slewing cushion valve, slewing brake valve, slewing reducer and slewing bearing.

Operator's cab
Steel structure body. Equipped with adjustable seat with headrest, adjustable console, air conditioning for heating and cooling, built-in sunshade, etc. Equipped with pilot control joysticks, windshield wiper and washer.

Slewing platform
Single ribbed plate structured and optimized slewing platform made from high-strength steel plate makes the layout of articulated points of the boom and derricking mechanism more reasonable. The engine hood is of a human-based layout.
There is a pinning mechanism installed in front of the slewing platform, which can prevent the superstructure from rotating during crane travelling.

Counterweight
Underslung movable counterweight plate combination, and the total weight is 21.5t (standard configuration). Different movable counterweight plates can be installed by the counterweight handler at the end of the slewing platform according to operating modes.

Outriggers
H-type outriggers, which are in box-shaped structure and welded of low-alloy and high-strength steel plate.
2-section horizontal outrigger beam can be extended and retracted with a horizontal cylinder and a set of outrigger extension / retraction rope.
After the outriggers are fully extended or retracted, the outrigger pads can be locked with retaining pins.
Manual outrigger control levers are fitted on both sides of the vehicle for controlling the outriggers to extend or retract simultaneously or independently. Each vertical cylinder is equipped with a two-way hydraulic lock to ensure stable and reliable operation of the crane.
The 5th outrigger is installed under the driver's cab. The working area is unlimitedwith the 5th outrigger extended.

Safety devices
The crane is equipped with an automatic load moment limiter, warning light, the digital LCD, hoisting limit switch, hook safety device, lowering limit switch, 5th outrigger over pressure protection device, two-way hydraulic lock, balance valve, relief valve, wireless remote controller.

Boom and telescoping mechanism
The boom consists of one basic boom and four telescopic booms, and the cylinder is made of low alloy high-strength steel, possessing good bending resistance. The boom structure adopts embedded slider, and at the same time adopts the slider compensation technology, which improves the guiding and lifting performance of the boom. Two telescopic cylinders with synchronized telescopic mechanism complete the free telescoping of the boom.

Jib
It consists of two jib sections. They are folded on the side of boom when not used and can be installed and removed by inserted pins.
The two jib sections are of a reducing and lattice structure. Jib section 1 is articulated on the head of top boom section with pins and can be assembled below an angle of 0, 15 or 30 to the telescopic boom according to your needs. The angle can be conveniently changed via the pins and pull bracket.

Rooster sheave
It is secured at the outside of the boom head when it is not used. It can be rotated around the shaft and pinned onto the boom head when it is used.
This option is set up for rapid hoists over the boom head to improve the working efficiency when the loads are light.

Electrical system
Adopting two-wire system, the power supply is 24V DC, and the whole electrical system is composed of the chassis electrical system and the superstructure electrical system. The superstructure electrical system mainly includes hoisting and lowering limit swtiches, overloading control, emergency stop control, signal indication, etc. The chassis electrical system mainly includes: MP3 player, air conditioner and cab heater, etc.

Specifications
Crane chassis

Engine
Yuchai YCK10380-30 specialized high-pressure common rail electric injection diesel engine for construction machinery.

Clutch
Single dry-type clutch.

Transmission
Mechanical 10-speed transmission with locking pin synchronizers in both the main and secondary cases, with transverse teeth outputs.

PTO
Rated output torque: 700N/m; output mode: flange connection, output flange rotation and engine rotation is of the same direction; rear-mounted power take-off, installed on the intermediate shaft at the bottom of the tranmission; manual pneumatic maneuvering.

Propeller shaft
Styre series open-type propeller shaft assy., and is with contrate gear on the flange.

Chassis frame
It adopts a box-type structure with high loading and anti-twisting capacity, and the material is high-strength structural steel plate.

Wheels and tires
Special wheel rim and inflated tires
Size:front axle: 385/95R25; rear axle: 325/95R24.

Steering system
Integral circulated ball power steering gear, steering oil pump and steering drive mechanism; the emergency steering is provided as a standard configuration.

Suspension
Transverally installed leaf spring suspension for the front axle, and rubber suspension for the rear axle.

Braking System
It consists of a traveling brake (foot brake), a parking or emergency brake (hand brake) and an auxiliary brake. The traveling brake is a double circuit pneumatic brake, acting on all wheel hubs; the parking or emergency brake is a spring brake, acting on the hubs of the second, third and fourth axles; the auxiliary brake is the engine exhaust and VVEB.

Electrical system
Two N200-type battery connected in series (each voltage 12V), using a single-wire system, the metal itself (negative) is used as the return line, and the negative is grounded through the main power switch, which composes of 24V output voltage;
The standard generator is an integrated AC generator with voltage regulating function , the output power is 2kW;
Combination lamps and rear fog lamps are installed; the cab instrument console uses a combination of instruments;
The plugs and connectors of all electrical components are imported.

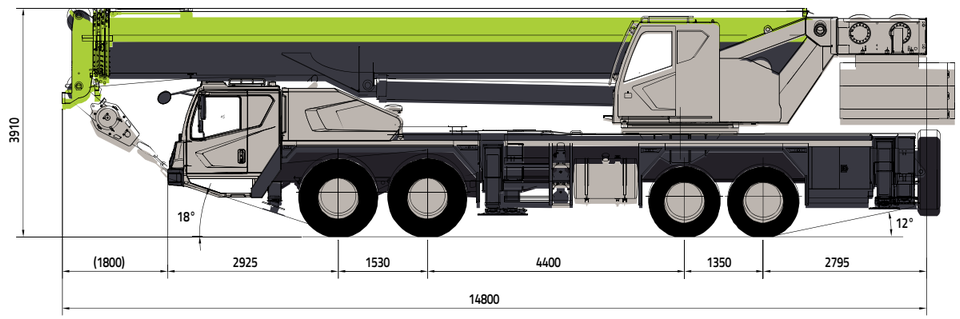
Driver's cab
Low-mounted full-width driver's cab of a steel structure. The front instrument condole, adjustable steering wheel and electric windows at the two sides, adjustable hydraulic damping seat, AC for both heating and cooling, and sun visor provide the driver with comfortable environment.

Technical Data

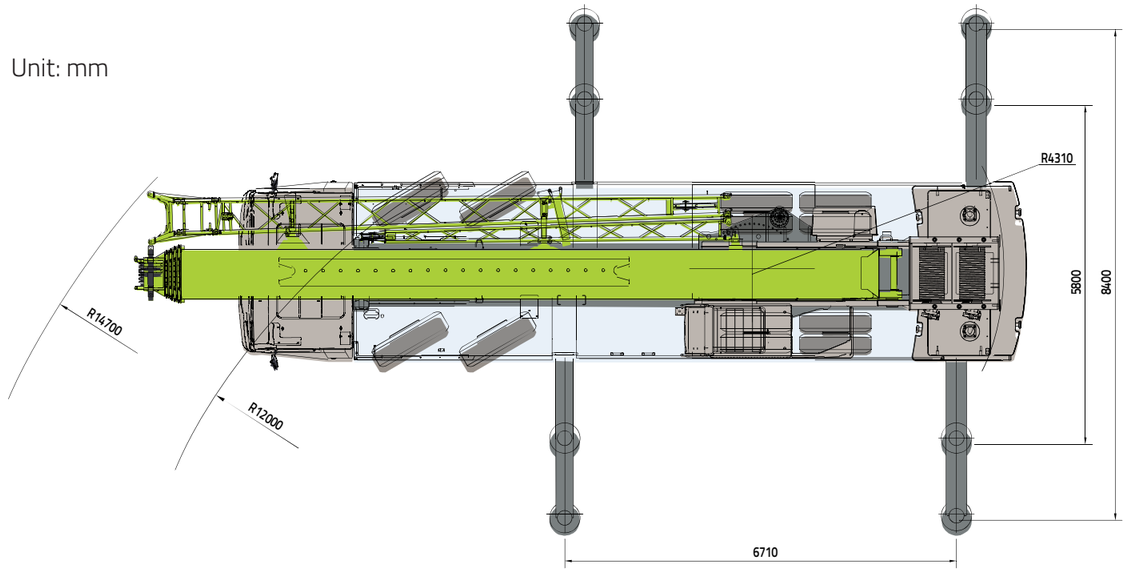
	Item	Unit	Value	Remarks
Working performance	Max. rated lifting capacity	kg	100000	
	Max. load moment of basic boom	kN.m	3450	
	Max. lifting moment with fully extended boom	kN.m	1862	
	Max. lifting height of basic boom	m	14.2	
	Max. lifting height of boom	m	50.9	These parameters do not include deflection of boom and jib.
	Max. lifting height of jib	m	67.2	
Working speeds	Max. hoist rope speed (main winch)	m/min	130	Drum 4th layer
	Max. hoist rope speed (auxiliary winch)	m/min	130	Drum 4th layer
	Boom derricking up time	s	65	
	Boom telescoping out time	s	145	
	Slewing speed	r/min	0-1.6	
Driving parameters	Max. operation altitude	m	2000	
	Max. driving speed	km/h	89	
	Max. gradeability	%	48	
	Min. turning diameter	m	24	
	Min. ground clearance	mm	325	
	Fuel consumption per hundred kilometers	L	41	
Masses	Deadweight in driving condition	kg	48000	
	Complete vehicle kerb mass	kg	47870	
	Front axle load	kg	22000	
	Rear axle load	kg	26000	
Dimensions	Overall dimensions (L×W×H)	mm	14800×3000×3910	
	Transversal distance between outriggers	m	Fully extended:8.4	Intermediately extended: 5.8
	Longitudinal distance between outriggers	m	6.71	
	Slewing radius of counterweight tail	mm	4310	
	Boom length	m	12.7-50.0	
	Boom angle	°	-1 - 80	
	Fixed Jib length	m	9.5, 16	
	Jib angle	°	0, 15, 30	

Dimensions

Unit: mm



Unit: mm



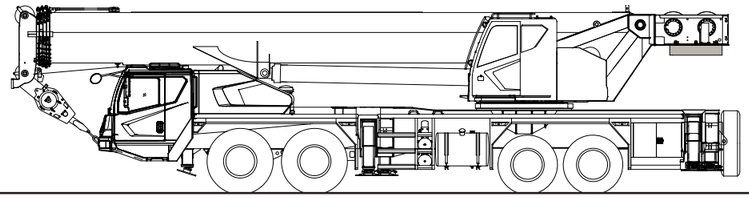
Travelling mode

Deadweight Max. driving speed Max. gradeability

① The total mass of the whole crane is 48

48t 89km/h 48%

With 1.5 tons fixed counterweight, the crane can travel at its highest speed.

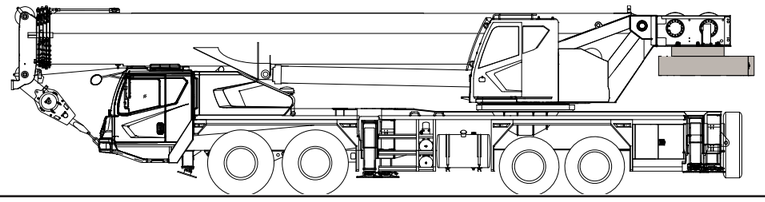


≤11t ≤11t ≤13t ≤13t

② The total mass of the whole crane is 56.5t

56.5t 77km/h 43%

With 1.5 tons fixed counterweight + 8.5t auxilairy counterweight, the crane can travel at its highest speed.

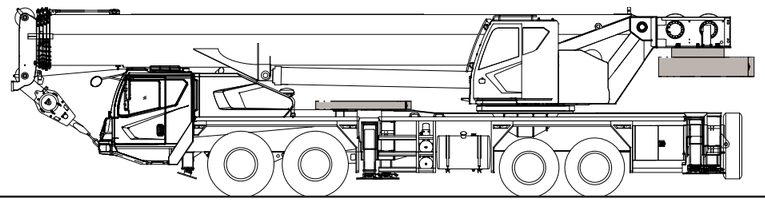


≤9.275t ≤9.275t ≤19t ≤19t

③ The total mass of the whole crane is 60.5t

60.5t 50km/h 40%

With 1.5 tons fixed counterweight + 8.5t auxilairy counterweight + 4t lower counterweight (at the counterweight mounting seat), the crane can travel at the highest speed of 50km/h.

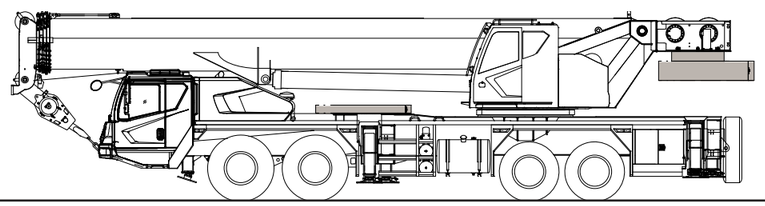


≤10.8t ≤10.8t ≤20t ≤20t

④ The total mass of the whole crane is 68t

68t 40km/h 34%

With 1.5 tons fixed counterweight + 8.5t auxilairy counterweight at the end of the slewing platform + 4t lower counterweight + 7.5t movable counterweight (at the counterweight mounting seat), the crane can travel at the highest speed of 40km/h.



≤13.65t ≤13.65t ≤20.4t ≤20.4t

Boom/Jib Combination

T: Boom
F: Jib

T7 T7F T7F2

Lifting heights + Lifting capacities

1.The outriggers should be fully or intermediately extended for all rated capacitieis. It is prohibited to lift a load when the outriggers are not extended.
2.When the 5th outrigger is extended, the values in the chart are applicable to 360-degree working range. When the 5th outrigger is not extended, lifting over the front working area is strictly prohibitd.
3.The values given in the rated capacity charts are the max. permissible lifting capacities under various OMs and specified operating conditions. The values as given in the tables include the mass of the hook (main hook: 510kg, auxiliary hook: 125 kg) and slings
Rated capacity = the actual lifting capacity of the crane + mass of the hook and slings
4.The working radius is the horizontal gravity center distance of the hook block from the rotational axis of the crane superstructure measured at the ground. The radius stated is valid under load conditions.
5.When a boom length or working radius is between two values in the chart, the rated capacity should be determined using the interpolation method. The rated capacity displayed in the load moment limiter is for reference only.
6.If the jib is mounted on the boom head during boom operation, the possible load should be subtracted by the mass of the sling and an extra 2300kg..
7.The maximum lifting capacity for the rooster sheave is 6500 kg. If the rated lifting capacity found out in the rated capacity chart is less than 6500 kg according to the actual working conditions, the lifting capacity found out in the table should be referred to.
For example:
The rated lifting capacity is 6500 kg when the crane is working with 41.4 m long boom (telescopic cylinder I fully extended) under 24 m working radius.
The rated lifting capacity is 5000 kg if the crane is working with 41.4 m long boom under 30 m working radius.
8.During operation, do not lift a load with both the main hook and auxiliary hook simultaneously.
9.The lifting height charts do not take changes of working radius and height caused by boom deflection into consideration.
10.For OMs marked with *, the reeving number should be 13 and an additional device should be installed
11.Form OMs marked with **, the ratd capacities are nominal values.
WARNING: When the boom length exceeds 30m, even if the hook is unloaded, derricking must be operated in strict accordance with the lifting height chart, otherwise it will cause overturning accidents.

Ilustration for rated capacities

OM with boom only

OM with boom and jib

Counterweight mass

Working radius

Max. reevings

Outriggers fully extended

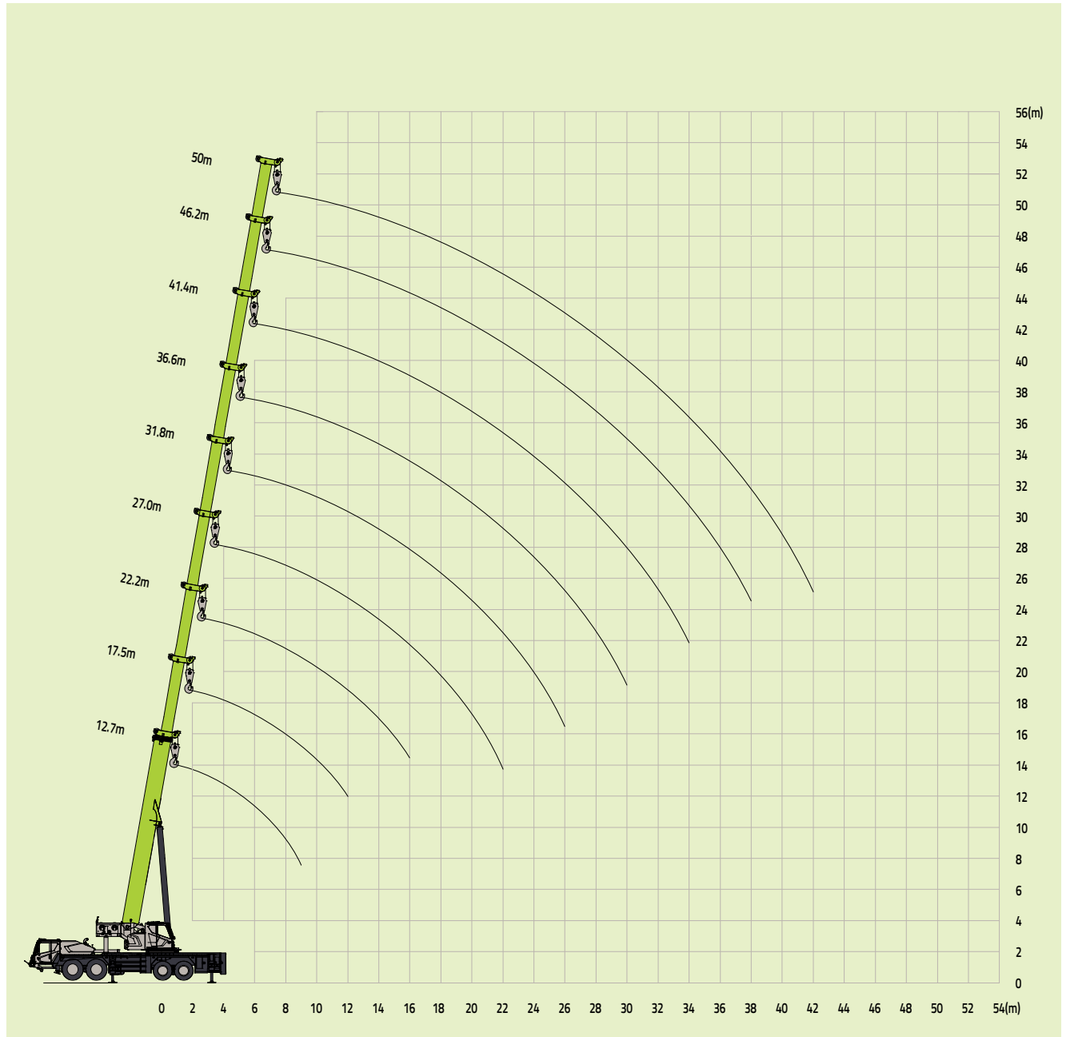
Outriggers intermediately etendedx

Full range slewing

Boom angle

Hook lifting capacity

Lifting Height Chart
Main boom



Lifting Capacity Chart

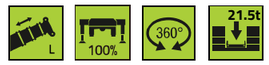
Main boom

Unit: ton

m	12.7	17.5	22.2	27.0	31.8	36.6	41.4	46.2	50.0	m
2.5	100.0**									2.5
3.0	80.0	70.0	50.0							3.0
3.5	80.0	70.0	50.0							3.5
4.0	76.0	70.0	50.0	38.0						4.0
4.5	73.0	70.0	50.0	38.0						4.5
5.0	70.0	65.0	50.0	38.0	36.0					5.0
5.5	64.0	60.0	48.0	38.0	36.0					5.5
6.0	58.0	55.0	46.5	37.0	36.0					6.0
7.0	48.0	47.0	42.0	36.0	35.0	31.0				7.0
8.0	41.5	41.0	38.0	34.0	33.0	30.0	22.0			8.0
9.0	36.0	35.5	35.0	32.0	30.0	28.0	22.0	19.0		9.0
10.0		31.0	31.0	29.0	27.5	26.0	21.0	18.0	14.5	10.0
11.0		27.0	27.0	27.0	25.5	24.0	20.0	17.0	14.0	11.0
12.0		23.5	23.5	25.0	24.0	22.0	18.5	16.0	13.5	12.0
14.0			17.5	19.0	19.5	19.0	16.0	14.0	13.0	14.0
16.0			13.5	14.8	15.5	16.0	14.5	12.5	11.5	16.0
18.0				11.8	12.5	13.0	13.0	11.5	10.5	18.0
20.0				9.5	10.2	10.7	11.2	10.5	9.5	20.0
22.0				7.7	8.4	8.9	9.4	9.5	8.6	22.0
24.0					7.0	7.5	8.0	8.3	7.8	24.0
26.0					5.8	6.3	6.8	7.1	7.2	26.0
28.0						5.3	5.8	6.1	6.3	28.0
30.0						4.5	5.0	5.3	5.5	30.0
32.0							4.2	4.5	4.7	32.0
34.0							3.6	3.9	4.1	34.0
36.0								3.3	3.5	36.0
38.0								2.8	3.0	38.0
40.0									2.6	40.0
42.0									2.2	42.0
I	0	4.8	9.5	9.5	9.5	9.5	9.5	9.5	9.5	I
II	0	0	0	4.8	9.6	14.4	19.2	24.0	27.8	II
	16	11	8	7	6	5	4	3	3	
	100t	70t	60t							

Lifting Capacity Chart

Main boom



Unit: ton

m	12.7	17.5	22.3	27.1	31.9	36.7	41.5	45.3	m
2.5	100.0**								2.5
3.0	80.0	70.0	38.0						3.0
3.5	80.0	70.0	38.0						3.5
4.0	76.0	70.0	38.0	36.0					4.0
4.5	73.0	70.0	38.0	36.0					4.5
5.0	70.0	65.0	38.0	36.0	30.0				5.0
5.5	64.0	60.0	38.0	36.0	30.0				5.5
6.0	58.0	55.0	38.0	36.0	30.0	22.0			6.0
7.0	48.0	47.0	38.0	36.0	30.0	22.0			7.0
8.0	41.5	41.0	36.0	36.0	30.0	22.0	19.5		8.0
9.0	36.0	35.5	34.0	35.0	29.0	21.0	18.5	16.0	9.0
10.0		31.0	32.0	33.0	27.0	20.0	17.5	15.0	10.0
11.0		27.0	28.0	29.5	26.0	18.7	16.5	14.0	11.0
12.0		23.5	24.5	26.0	24.0	17.5	15.5	13.5	12.0
14.0			19.3	20.3	20.8	15.2	13.5	12.5	14.0
16.0			15.2	16.1	16.6	13.5	12.0	11.0	16.0
18.0				13.0	13.5	12.2	10.6	10.0	18.0
20.0				10.7	11.2	11.0	9.6	9.1	20.0
22.0				8.9	9.4	9.9	9.0	8.3	22.0
24.0					8.0	8.4	8.2	7.6	24.0
26.0					6.8	7.2	7.5	7.0	26.0
28.0						6.2	6.5	6.3	28.0
30.0						5.3	5.6	5.8	30.0
32.0							5.0	5.2	32.0
34.0							4.3	4.5	34.0
36.0								3.9	36.0
38.0								3.4	38.0
40.0									40.0
42.0									42.0
I	0	4.8	4.8	4.8	4.8	4.8	4.8	4.8	I
II	0	0	4.8	9.6	14.4	19.2	24.0	27.8	II
	16	11	8	7	6	5	4	3	
	100t	70t	60t						

Lifting Capacity Chart

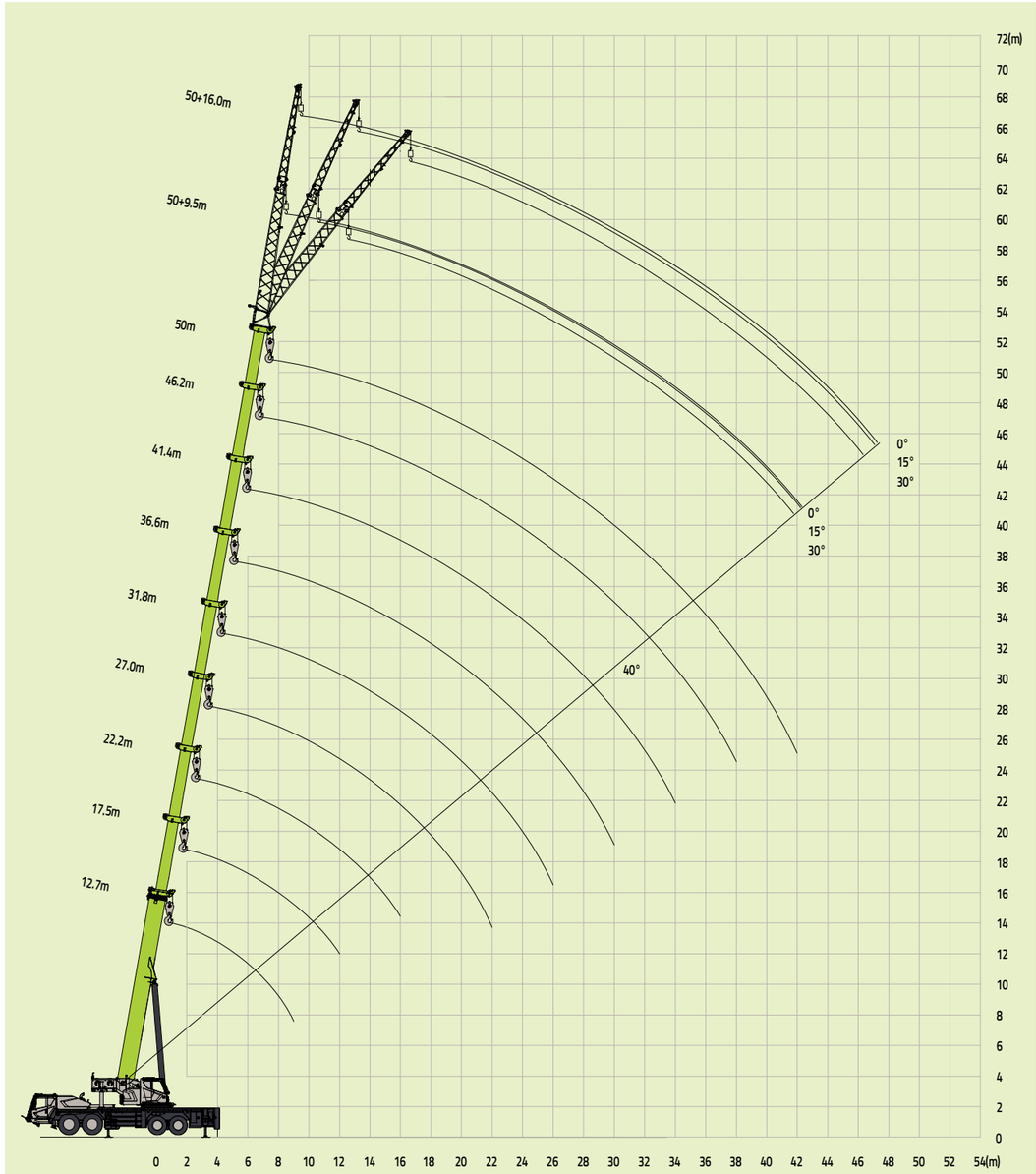
Main boom

Unit: ton

m	12.7	17.5	22.3	27.1	31.9	36.7	40.5	m
2.5	100.0**							2.5
3.0	80.0	38.0	36.0					3.0
3.5	80.0	38.0	36.0					3.5
4.0	76.0	38.0	36.0	30.0				4.0
4.5	73.0	38.0	36.0	30.0				4.5
5.0	70.0	38.0	36.0	30.0	22.0			5.0
5.5	64.0	38.0	36.0	30.0	22.0			5.5
6.0	58.0	38.0	36.0	30.0	22.0	21.0		6.0
7.0	48.0	38.0	36.0	30.0	22.0	20.0		7.0
8.0	41.5	38.0	34.0	28.0	20.5	18.7	17.0	8.0
9.0	36.0	36.0	32.0	26.0	19.0	17.2	16.0	9.0
10.0		33.0	31.0	24.0	17.5	16.0	15.0	10.0
11.0		30.0	30.0	22.0	16.0	14.5	14.0	11.0
12.0		26.0	27.0	20.5	15.0	13.5	13.0	12.0
14.0			21.0	18.0	13.0	12.0	11.3	14.0
16.0			16.7	16.0	11.5	10.5	10.0	16.0
18.0				14.3	10.3	9.4	9.0	18.0
20.0				12.0	9.3	8.4	8.0	20.0
22.0				10.2	8.5	7.7	7.2	22.0
24.0					7.8	7.0	6.6	24.0
26.0					7.1	6.4	6.0	26.0
28.0						5.8	5.4	28.0
30.0						5.4	5.0	30.0
32.0							4.6	32.0
34.0							4.2	34.0
36.0								36.0
38.0								38.0
40.0								40.0
42.0								42.0
I	0	0	0	0	0	0	0	I
II	0	4.8	9.6	14.4	19.2	24.0	27.8	II
	16	11	8	7	6	5	4	
	100t	60t						

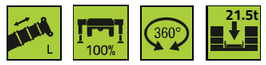
Lifting Height Chart

Main boom + jib



Lifting Capacity Chart

Main boom + jib



Unit: ton

Main boom (m)+ **16.0m** Jib + Offset

	50.0+9.5			50.0+16.0			
	0°	15°	30°	0°	15°	30°	
80	5.5	3.3	2.5	3.0	2.0	1.5	**80**
78	5.0	3.3	2.5	3.0	2.0	1.45	**78**
76	4.8	3.2	2.5	2.9	1.9	1.4	**76**
74	4.5	3.1	2.5	2.7	1.8	1.35	**74**
72	4.2	3.0	2.5	2.5	1.7	1.3	**72**
70	3.9	2.9	2.4	2.3	1.65	1.25	**70**
68	3.6	2.8	2.3	2.1	1.6	1.25	**68**
66	3.4	2.7	2.2	2.0	1.55	1.2	**66**
64	3.2	2.6	2.1	1.9	1.5	1.2	**64**
62	3.0	2.5	2.05	1.8	1.45	1.15	**62**
60	2.9	2.4	2.0	1.7	1.4	1.15	**60**
58	2.8	2.3	1.95	1.6	1.35	1.1	**58**
56	2.7	2.2	1.9	1.55	1.3	1.1	**56**
54	2.6	2.1	1.85	1.5	1.25	1.05	**54**
52	2.5	2.0	1.8	1.45	1.2	1.05	**52**
50	2.4	1.9	1.7	1.35	1.15	1.0	**50**
48	2.3	1.8	1.6	1.3	1.1	0.95	**48**
46	2.2	1.7	1.5	1.25	1.05	0.9	**46**
44	2.0	1.6	1.4	1.2	1.0	0.85	**44**
42	1.8	1.5	1.3	1.15	0.95	0.8	**42**
40	1.6	1.4	1.2	1.1	0.9	0.75	**40**
38							**38**
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